

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: CORELITE

Report Number: P937409

Luminaire Tested: SQ4-FB-100U-050D-830-1D-UNV-STD-W-12

Issue Date: 12/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P937409
REPORT IS A COMBINATION OF REPORTS P933557 AND P933786
Test Lab: INNOVATION CENTER
Issue Date: 12/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ4-FB-100U-050D-830-1D-UNV-STD-W-12
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L
Light Source: -
Ballast/Driver: -

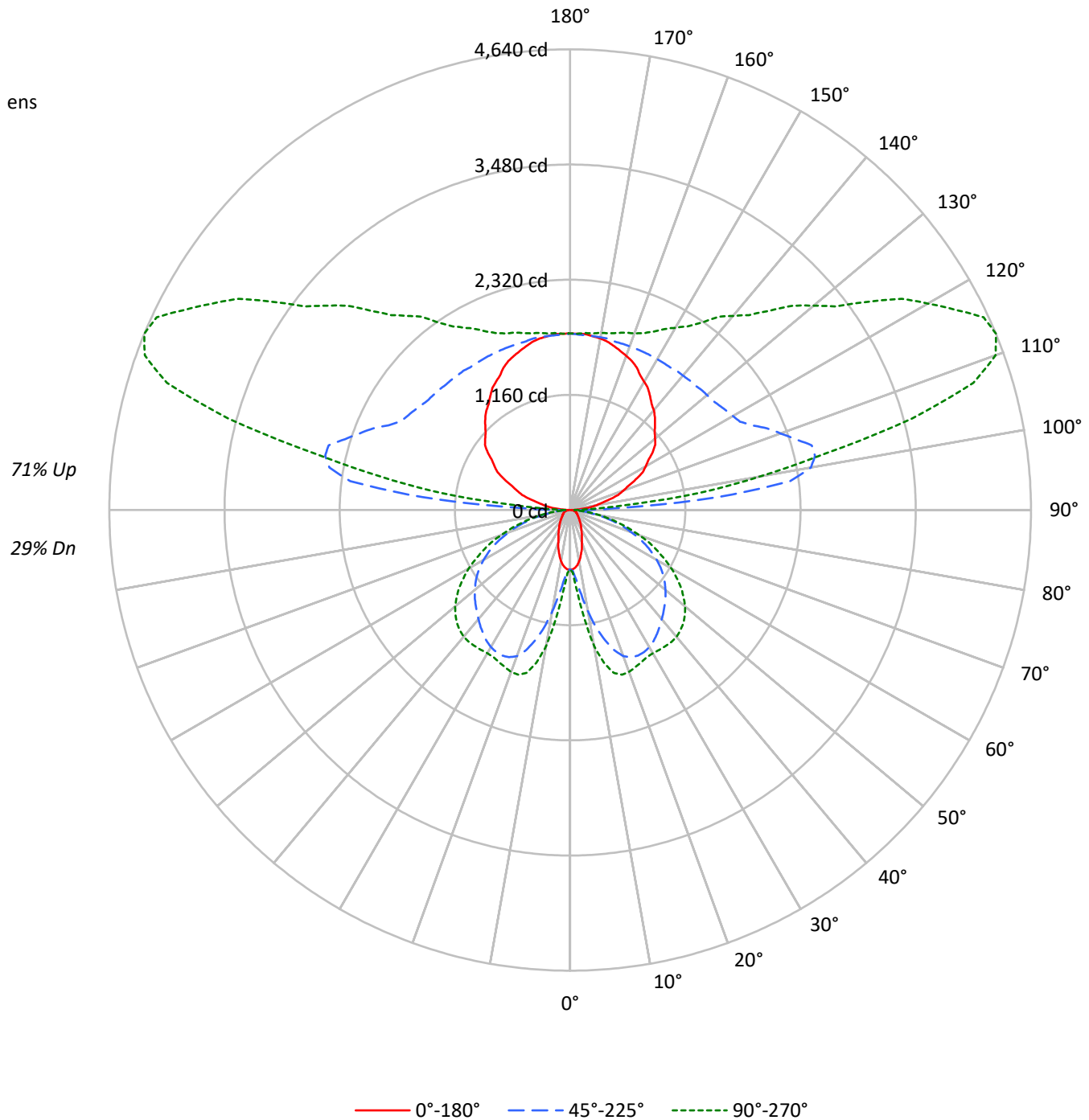
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16157.4 lumens
Efficiency: N/A
Efficacy: 130.7 lumens/watt
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 12' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 123.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P937409
CATALOG NUMBER: SQ4-FB-100U-050D-830-1D-UNV-STD-W-12

Luminous Intensity Polar Plot





TEST NUMBER: P937409

CATALOG NUMBER: SQ4-FB-100U-050D-830-1D-UNV-STD-W-12

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				
RC	80				70				50				30				10			0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	102	102	102	102	91	91	91	91	71	71	71	53	53	53	37	37	37	37	37	37	29
1	93	88	84	81	83	79	76	73	62	60	58	46	45	44	32	31	30	32	31	30	23
2	84	77	71	66	75	69	64	59	54	50	47	40	38	36	28	26	25	28	26	25	19
3	76	67	60	54	68	60	54	49	47	43	39	35	32	30	24	22	21	24	22	21	16
4	70	59	51	45	62	53	46	41	42	37	33	31	28	25	21	19	18	21	19	18	13
5	64	52	44	38	57	47	40	35	37	32	28	28	24	21	19	17	15	19	17	15	11
6	58	47	39	33	52	42	35	30	33	28	24	25	21	18	17	15	13	17	15	13	10
7	54	42	34	28	48	38	31	26	30	25	21	22	19	16	15	13	11	15	13	11	8
8	50	38	30	25	44	34	27	23	27	22	18	20	17	14	14	12	10	14	12	10	7
9	46	34	27	22	41	31	24	20	24	20	16	18	15	12	13	11	9	13	11	9	7
10	43	31	24	19	38	28	22	18	22	18	14	17	14	11	12	10	8	12	10	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1851	1851	1851
5°	1809	2139	2487
10°	1641	3119	4123
15°	1395	4076	4979
20°	1136	4725	5074
25°	948	4945	4971
30°	800	4978	4962
35°	708	4896	5090
40°	617	4791	5223
45°	559	4713	5243
50°	513	4644	5156
55°	492	4542	4928
60°	504	4345	4567
65°	526	4044	4071
70°	561	3529	3439
75°	624	2879	2684
80°	687	1999	1809
85°	622	1063	926

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5243 cd/sqm



TEST NUMBER: P937409

CATALOG NUMBER: SQ4-FB-100U-050D-830-1D-UNV-STD-W-12

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	0.5
10°-20°	343.0	2.1
20°-30°	599.9	3.7
30°-40°	772.3	4.8
40°-50°	862.6	5.3
50°-60°	826.2	5.1
60°-70°	654.7	4.1
70°-80°	385.0	2.4
80°-90°	113.7	0.7
90°-100°	866.4	5.4
100°-110°	2277.9	14.1
110°-120°	2361.9	14.6
120°-130°	1894.6	11.7
130°-140°	1486.5	9.2
140°-150°	1141.0	7.1
150°-160°	821.7	5.1
160°-170°	502.8	3.1
170°-180°	169.9	1.1
0°-30°	1020.3	6.3
0°-40°	1792.5	11.1
0°-60°	3481.3	21.5
0°-90°	4634.8	28.7
90°-120°	5506.2	34.1
90°-150°	10028.3	62.1
90°-180°	11523.0	71.3
0°-180°	16157.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	598	598	598	598	598	
5°	583	625	704	796	825	54
15°	437	806	1358	1647	1698	122
25°	279	914	1618	1689	1691	128
35°	188	873	1524	1610	1674	118
45°	129	696	1346	1543	1612	100
55°	92	442	1143	1327	1364	84
65°	73	235	848	954	968	72
75°	54	144	466	512	514	56
85°	19	44	115	127	129	20
90°	12	33	91	45	45	11
95°	114	449	1492	769	524	127
105°	410	622	2518	3823	3567	435
115°	729	885	2017	4024	4593	720
125°	1014	1137	1835	3100	3658	900
135°	1208	1330	1778	2503	2838	935
145°	1402	1491	1755	2135	2302	878
155°	1584	1628	1755	1926	1983	728
165°	1709	1732	1755	1824	1847	482
175°	1778	1778	1767	1789	1789	169
180°	1778	1778	1778	1778	1778	



TEST NUMBER: P937409

CATALOG NUMBER: SQ4-FB-100U-050D-830-1D-UNV-STD-W-12

CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3
2.5°	598.3	598.3	602.1	604.0	607.8	609.7	613.7	617.5	629.0	631.0	634.8
5°	582.9	590.5	615.6	625.1	652.1	688.6	704.0	729.0	781.0	796.3	806.0
7.5°	559.7	577.0	638.6	654.0	721.4	817.6	857.9	911.8	994.5	1034.9	1067.6
10°	523.2	559.7	669.4	706.0	815.6	961.8	1036.8	1111.8	1236.9	1292.7	1313.8
12.5°	482.8	542.4	702.1	752.1	909.8	1123.4	1213.8	1296.5	1438.9	1513.9	1525.4
15°	436.7	517.5	732.9	806.0	1009.9	1258.0	1358.1	1460.0	1592.8	1646.6	1660.1
17.5°	396.3	498.2	761.7	838.7	1086.9	1379.2	1481.1	1565.8	1673.6	1710.1	1719.7
20°	346.3	467.5	781.0	881.0	1167.7	1467.7	1565.8	1631.2	1704.4	1727.4	1731.2
22.5°	309.7	434.7	792.5	896.4	1221.5	1521.6	1604.3	1656.3	1706.3	1713.9	1715.8
25°	279.0	398.2	790.6	913.7	1267.7	1554.3	1617.7	1656.3	1685.0	1689.0	1689.0
27.5°	250.1	357.8	782.9	917.6	1302.3	1562.0	1612.0	1638.9	1652.4	1660.1	1660.1
30°	225.0	319.3	763.7	909.8	1317.7	1554.3	1594.7	1608.2	1621.6	1633.1	1638.9
32.5°	205.8	282.8	734.8	894.4	1319.6	1535.0	1563.9	1571.6	1590.8	1617.7	1627.4
35°	188.5	246.3	702.1	873.3	1308.1	1504.3	1523.5	1531.2	1569.7	1610.1	1623.5
37.5°	171.2	219.3	659.8	836.8	1290.7	1467.7	1481.1	1494.6	1554.3	1602.4	1617.7
40°	153.9	196.2	609.7	796.3	1263.8	1423.5	1435.1	1456.2	1535.0	1590.8	1606.2
42.5°	140.4	177.0	555.9	754.1	1229.2	1373.5	1390.8	1421.6	1511.9	1571.6	1588.9
45°	128.9	157.7	498.2	696.4	1185.0	1321.5	1346.5	1388.9	1485.1	1542.7	1558.1
47.5°	117.3	144.3	438.6	636.7	1136.9	1269.6	1302.3	1350.4	1448.4	1504.3	1517.7
50°	107.7	130.8	379.0	573.2	1084.9	1213.8	1252.3	1302.3	1402.4	1454.3	1471.6
52.5°	100.0	119.3	323.1	509.7	1025.3	1156.1	1200.4	1252.3	1346.5	1396.5	1408.1
55°	92.3	109.7	275.0	442.4	963.7	1094.5	1142.6	1192.6	1285.0	1327.3	1335.0
57.5°	88.5	101.9	234.7	379.0	898.4	1025.3	1079.1	1125.3	1211.8	1244.6	1252.3
60°	82.7	96.2	203.9	325.1	827.1	959.9	1006.1	1052.2	1125.3	1152.3	1158.0
62.5°	77.0	92.3	180.8	273.1	754.1	883.0	929.1	971.4	1033.0	1052.2	1059.9
65°	73.1	88.5	163.5	234.7	679.0	802.2	848.4	884.9	934.9	954.1	957.9
67.5°	69.2	84.6	150.0	202.0	604.0	721.4	756.0	790.6	829.0	848.4	850.3
70°	63.5	80.8	138.5	178.9	527.0	629.0	657.9	694.4	725.2	734.8	740.6
72.5°	59.7	75.0	130.8	161.6	448.2	540.5	567.5	588.6	615.6	625.1	625.1
75°	53.8	67.3	123.1	144.3	367.4	442.4	465.5	486.7	507.8	511.7	505.9
77.5°	48.1	59.7	105.8	121.2	286.6	350.1	369.3	380.9	398.2	402.0	403.9
80°	40.4	51.9	82.7	94.3	207.7	257.7	271.2	280.9	296.3	296.3	300.1
82.5°	30.8	40.4	59.7	67.3	140.4	177.0	188.5	194.3	203.9	203.9	203.9
85°	19.2	25.0	38.4	44.3	84.6	107.7	115.4	117.3	125.0	127.0	127.0
87.5°	9.7	13.5	25.0	27.0	44.3	55.8	55.8	59.7	59.7	57.7	55.8
90°	12.0	21.5	31.0	33.4	52.5	77.9	90.6	80.6	60.4	45.3	45.3
92.5°	47.7	128.8	209.9	230.2	323.7	448.3	510.6	447.5	321.3	226.7	217.7
95°	114.5	263.0	411.5	448.6	796.4	1260.4	1492.3	1331.7	1010.4	769.4	742.0
97.5°	198.0	329.0	459.9	492.7	1072.8	1846.3	2233.1	2131.6	1928.5	1776.2	1724.3
100°	262.4	381.2	499.9	529.6	1173.4	2031.8	2461.0	2468.5	2483.3	2494.4	2432.5
102.5°	317.3	428.1	538.9	566.6	1219.6	2090.2	2525.5	2654.8	2913.5	3107.6	3054.5
105°	410.4	504.2	598.1	621.5	1253.8	2096.8	2518.3	2808.3	3388.4	3823.3	3794.8
107.5°	505.8	593.3	680.8	702.7	1260.1	2003.4	2375.1	2779.7	3588.7	4195.5	4202.4
110°	570.3	649.2	728.2	748.0	1250.5	1920.7	2255.8	2708.1	3612.5	4290.9	4320.6



TEST NUMBER: P937409
 CATALOG NUMBER: SQ4-FB-100U-050D-830-1D-UNV-STD-W-12

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	633.4	708.8	784.0	802.8	1251.0	1848.5	2147.3	2610.2	3535.9	4230.1	4275.7
115°	728.9	798.4	867.8	885.2	1262.5	1765.6	2017.3	2463.1	3354.9	4023.7	4086.9
117.5°	823.1	886.2	949.3	965.1	1286.0	1713.8	1927.8	2330.2	3135.0	3738.6	3808.7
120°	878.0	937.4	996.8	1011.6	1305.1	1696.4	1892.0	2259.7	2995.1	3546.6	3614.7
122.5°	931.7	991.7	1051.5	1066.5	1332.6	1687.2	1864.6	2195.6	2857.9	3354.5	3421.7
125°	1014.0	1068.6	1123.2	1136.9	1369.5	1679.7	1834.8	2116.0	2678.5	3100.4	3162.3
127.5°	1080.8	1135.9	1191.1	1204.8	1406.5	1675.3	1809.7	2051.2	2534.2	2896.4	2948.6
130°	1116.6	1176.0	1235.3	1250.2	1433.5	1678.0	1800.1	2015.2	2445.2	2767.6	2815.9
132.5°	1153.6	1213.0	1272.3	1287.2	1455.3	1679.6	1791.7	1984.2	2369.2	2657.9	2701.1
135°	1208.5	1262.5	1316.6	1330.1	1479.2	1678.1	1777.5	1938.7	2260.9	2502.7	2540.0
137.5°	1264.5	1318.0	1371.6	1385.0	1515.0	1688.4	1775.1	1911.3	2183.9	2388.3	2418.8
140°	1311.1	1360.4	1409.6	1422.0	1536.9	1690.1	1766.7	1884.4	2119.8	2296.4	2324.9
142.5°	1346.8	1392.4	1438.0	1449.4	1555.1	1696.1	1766.7	1870.1	2076.9	2232.0	2256.4
145°	1401.7	1441.5	1481.2	1491.2	1579.0	1696.2	1754.8	1839.3	2008.5	2135.3	2153.9
147.5°	1456.6	1495.3	1534.0	1543.7	1614.0	1707.9	1754.8	1821.4	1954.4	2054.3	2069.6
150°	1492.3	1527.3	1562.3	1571.1	1632.4	1714.0	1754.8	1811.0	1923.4	2007.7	2020.1
152.5°	1529.3	1555.8	1582.4	1589.0	1644.2	1717.9	1754.8	1802.8	1898.7	1970.7	1980.1
155°	1584.2	1603.8	1623.5	1628.4	1670.5	1726.7	1754.8	1793.0	1869.3	1926.5	1932.7
157.5°	1624.7	1643.8	1663.0	1667.7	1696.8	1735.5	1754.8	1784.5	1843.8	1888.4	1892.8
160°	1652.2	1667.1	1681.9	1685.6	1708.7	1739.4	1754.8	1780.3	1831.1	1869.3	1871.8
162.5°	1679.6	1690.7	1701.9	1704.6	1721.4	1743.6	1754.8	1776.2	1819.2	1851.4	1853.8
165°	1709.4	1719.5	1729.6	1732.1	1739.6	1749.8	1754.8	1770.2	1800.9	1824.0	1826.4
167.5°	1736.9	1741.6	1746.4	1747.7	1754.0	1762.5	1766.7	1776.8	1797.0	1812.1	1813.1
170°	1754.8	1759.6	1764.4	1765.5	1765.9	1766.4	1766.7	1776.8	1797.0	1812.1	1812.1
172.5°	1764.3	1765.3	1766.4	1766.7	1766.7	1766.7	1766.7	1774.6	1790.6	1802.5	1801.6
175°	1777.5	1777.5	1777.5	1777.5	1773.9	1769.1	1766.7	1771.8	1781.8	1789.3	1789.3
177.5°	1777.5	1777.5	1777.5	1777.5	1774.7	1771.0	1769.1	1773.1	1781.0	1787.0	1785.9
180°	1777.5	1777.5	1777.5	1777.5	1777.5	1777.5	1777.5	1777.5	1777.5	1777.5	1777.5



TEST NUMBER: P937409

CATALOG NUMBER: SQ4-FB-100U-050D-830-1D-UNV-STD-W-12

CANDELA DISTRIBUTION (continued):

	80°	90°
0°	598.3	598.3
2.5°	638.6	634.8
5°	821.4	825.2
7.5°	1106.1	1104.2
10°	1375.4	1392.7
12.5°	1571.6	1575.4
15°	1690.9	1698.5
17.5°	1737.1	1739.0
20°	1739.0	1735.1
22.5°	1717.7	1713.9
25°	1692.8	1690.9
27.5°	1669.7	1671.7
30°	1660.1	1665.8
32.5°	1660.1	1669.7
35°	1663.9	1673.6
37.5°	1662.0	1673.6
40°	1654.3	1667.7
42.5°	1633.1	1642.8
45°	1600.4	1612.0
47.5°	1558.1	1565.8
50°	1504.3	1511.9
52.5°	1437.0	1438.9
55°	1356.2	1363.8
57.5°	1269.6	1271.5
60°	1173.4	1179.1
62.5°	1071.5	1071.5
65°	963.7	967.6
67.5°	852.2	861.7
70°	738.7	740.6
72.5°	627.1	627.1
75°	511.7	513.6
77.5°	402.0	402.0
80°	298.2	300.1
82.5°	205.8	209.7
85°	128.9	128.9
87.5°	59.7	53.8
90°	45.3	45.3
92.5°	181.5	145.5
95°	632.9	523.7
97.5°	1516.5	1308.7
100°	2184.9	1937.3
102.5°	2842.5	2630.4
105°	3680.8	3566.8
107.5°	4230.0	4257.5
110°	4439.4	4558.2



TEST NUMBER: P937409

CATALOG NUMBER: SQ4-FB-100U-050D-830-1D-UNV-STD-W-12

CANDELA DISTRIBUTION (continued):

	80°	90°
112.5°	4458.1	4640.5
115°	4339.9	4592.7
117.5°	4089.2	4369.7
120°	3887.2	4159.7
122.5°	3690.4	3959.3
125°	3409.9	3657.5
127.5°	3157.6	3366.5
130°	3008.8	3201.8
132.5°	2873.9	3046.8
135°	2688.9	2838.0
137.5°	2540.7	2662.7
140°	2438.9	2552.9
142.5°	2354.5	2452.6
145°	2228.1	2302.3
147.5°	2131.1	2192.6
150°	2070.0	2119.8
152.5°	2017.7	2055.4
155°	1957.7	1982.6
157.5°	1910.3	1927.8
160°	1881.9	1892.0
162.5°	1863.3	1872.9
165°	1836.6	1846.6
167.5°	1817.4	1821.6
170°	1812.1	1812.1
172.5°	1797.9	1794.1
175°	1789.3	1789.3
177.5°	1781.7	1777.5
180°	1777.5	1777.5



TEST NUMBER: P937409
 CATALOG NUMBER: SQ4-FB-100U-050D-830-1D-UNV-STD-W-12

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	0.78	1.49	1.89	2.61	4.15	13.97	14.68	15.08	15.80	17.34
	3H	1.47	2.11	2.59	3.23	4.79	15.80	16.44	16.92	17.57	19.13
	4H	1.76	2.37	2.89	3.49	5.06	16.44	17.05	17.58	18.18	19.74
	6H	2.00	2.57	3.15	3.69	5.27	16.87	17.43	18.01	18.56	20.13
	8H	2.07	2.60	3.21	3.74	5.31	16.99	17.52	18.13	18.67	20.24
	12H	2.08	2.59	3.23	3.72	5.32	17.05	17.56	18.20	18.70	20.29
4H	2H	7.98	8.59	9.12	9.71	11.28	14.22	14.83	15.36	15.96	17.52
	3H	9.53	10.05	10.68	11.19	12.77	16.26	16.77	17.41	17.92	19.50
	4H	9.62	10.09	10.77	11.23	12.83	17.02	17.49	18.17	18.63	20.23
	6H	9.62	10.03	10.78	11.19	12.78	17.56	17.96	18.72	19.12	20.71
	8H	9.60	9.97	10.75	11.13	12.73	17.72	18.10	18.88	19.25	20.85
	12H	9.55	9.89	10.72	11.05	12.66	17.81	18.15	18.98	19.31	20.92
8H	4H	11.06	11.43	12.21	12.59	14.19	17.07	17.45	18.23	18.60	20.21
	6H	11.29	11.60	12.47	12.80	14.40	17.70	18.01	18.87	19.20	20.81
	8H	11.31	11.58	12.49	12.75	14.37	17.92	18.19	19.10	19.36	20.99
	12H	11.27	11.51	12.46	12.68	14.33	18.06	18.30	19.25	19.47	21.12
12H	4H	11.20	11.54	12.37	12.70	14.31	17.02	17.36	18.19	18.52	20.13
	6H	11.55	11.82	12.73	13.00	14.62	17.68	17.95	18.86	19.12	20.75
	8H	11.61	11.85	12.80	13.02	14.68	17.91	18.14	19.09	19.31	20.97